AMENDMENTS TO THE CLAIMS

Please amend the claims as indicated below.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A microscope comprising:

a light source including a control device configured to control an intensity of light emitted by the light source;

an illuminating optical system having a numerical aperture and being configured to illuminate a specimen;

an aperture device disposed in an illumination beam path and configured to modify the numerical aperture; ~~and~~

a spectral correction device disposed in the illumination beam path and configured to ~~correct a~~ change ~~in~~ a spectral intensity distribution of the light emitted by the light source ~~so that a spectral intensity distribution of light directed onto the specimen remains substantially unchanged;~~

~~wherein upon a change of the numerical aperture by the aperture device, the light source is controllable by the control device of the light source so that a light flux through the illuminating optical system remains substantially unchanged~~

and

a control unit configured to concurrently control the control device and the spectral correction device so that, upon a change in the numerical aperture, both a light flux through the illuminating optical system and a spectral intensity distribution of light directed onto the specimen remain substantially unchanged.

Claim 2 (original): The microscope as recited in claim 1 wherein the control device is configured to change the spectral intensity distribution of the light emitted by the light source.

Claim 3 (original): The microscope as recited in claim 1 further comprising a light-sensitive detector disposed in the illumination beam path and configured to detect at least a portion of the light flux through the illuminating optical system and generate, as a function of the detected light flux, a signal that is usable for open-loop or closed-loop control of at least one the light source and/or of the spectral correction device.

Claim 4 (original): The microscope as claim 1 wherein the aperture device includes an aperture having a changeable diameter.

Claim 5 (currently amended): The microscope as recited claim 4 wherein the diameter of the aperture is ~~chageable~~ changeable using a motor.

Claim 6 (original): The microscope as recited in claim 1 wherein the light source is powered electrically and wherein the control device is configured to modify electrical power delivered to the light source.

Claim 7 (original): The microscope as recited in claim 1 wherein the spectral correction device includes a filter disposable in the illumination beam path, the filter having a plurality of working positions, a filter characteristic of the filter being a function of the respective working position.

Claim 8 (original): The microscope as recited in claim 7 wherein the filter is an absorption filter, the absorption filter having a respective thickness as each working position, the filter characteristic being a spectral transmittance of the filter.

Claim 9 (original): The microscope as recited in claim 7 wherein the filter is an interference filter, each working position corresponding to a respective position on a surface of the filter, the filter characteristic being a spectral interference.

Claim 10 (original): The microscope as recited in claim 7 wherein the filter is a reflection filter, each working position corresponding to a respective position on a surface of the filter, the filter characteristic being a spectral reflection capability.

Claim 11 (original): The microscope as recited in claim 7 wherein a spectral transmittance of the filter changes at least one of continuously and discontinuously.

Claim 12 (original): The microscope as recited in claim 11 wherein the spectral transmittance of the filter changes in stepped fashion.

Claim 13 (original): The microscope as recited in claim 7 wherein the spectral correction device is capable of changing a spectral intensity distribution of the light from the light source by a motion of the spectral correction device relative to the illumination beam path.

Claim 14 (original): The microscope as recited in claim 13 further comprising a motor configured to move the spectral correction device.

Claim 15 (original): The microscope as recited in claim 13 wherein the spectral correction device includes at least one of a linearly displaceable filter and a rotatable filter.

Claim 16 (original): The microscope as recited in claim 13 wherein respective intensities of the light emitted by the light source and respective working positions of the filter are predeterminable and storable as a function of respective settings of the aperture device.

Claim 17 (original): The microscope as recited in claim 1 wherein the spectral correction device is configured to influence the light intensity of at least one of a green and a red spectral region of the light from the light source.

Claim 18 (currently amended): The microscope as recited in claim 1 ~~further comprising~~ wherein the control unit includes a control computer configured to control ~~at least one of~~ the aperture device~~, the control device, and the spectral correction device~~.

Claim 19 (currently amended): A method for modifying a light flux in a microscope including a light source having a control device, an illuminating optical system for illuminating a specimen, ~~and~~ an aperture device disposed in an illumination beam path of the microscope and a spectral correction device disposed in the illumination beam path, the method comprising:

changing a numerical aperture of the illuminating optical system using the aperture device;

concurrently controlling~~, upon the changing of the numerical aperture, the light source using the control device so that a light flux passing through the illuminating optical system remains substantially unchanged, the controlling causing a change in a spectral intensity distribution of light emitted by the light source; and~~

~~correcting~~ the control device and the spectral correction device so that, upon a change in the numerical aperture, both a light flux through the illuminating optical system and ~~change in the spectral intensity distribution of the light emitted by the light source so that~~ a spectral intensity distribution of light directed onto a the specimen remains substantially unchanged.

Claim 20 (currently amended): The method as recited in claim 19 further comprising:

detecting at least a portion of the light flux passing through the illuminating optical system; and

generating a signal based on the detecting, the signal being usable for at least one of open-loop or closed-loop control of the light source and for ~~the~~ correcting ~~the~~ a spectral intensity distribution of ~~the~~ light emitted by the light source.

Claim 21 (currently amended): The method as recited in claim 19 wherein the ~~correcting~~ controlling is performed by moving a the spectral correction device relative to the illumination beam path.

Claim 22 (currently amended): The method as recited in claim 21 wherein the moving of the spectral correction ~~means~~ device is performed using a motor.

Claim 23 (original): The method as recited in claim 21 wherein the moving of the spectral correction device is performed by at least one of displacing a first filter and rotating a second filter, the second filter including a circular disk.

Claim 24 (currently amended): The method as recited in claim 19 wherein the ~~correcting~~ controlling ~~is performed by~~ includes moving a the spectral correction device relative to the illumination beam path and further comprising:

providing, as a function of respective settings of the aperture device, respective values of the intensity of the light emitting by the light source and respective working positions of the spectral correction device, and

storing the provided values and working positions in a data storage unit.

Claim 25 (currently amended): The method as in claim 19 further comprising controlling ~~at least one of~~ the aperture device using a control computer, and wherein the controlling the control device and the spectral correction device is performed using ~~a~~ the control computer.

Claim 26 (currently amended): The method as recited in claim 19 wherein the ~~correcting is performed by~~ controlling includes moving ~~a~~ the spectral correction device relative to the illumination beam path and ~~further comprising controlling the spectral correction device~~ the controlling is performed using a control computer.

Claim 27 (currently amended): The method as recited in claim 19 wherein the ~~correcting is performed by~~ the controlling includes moving ~~a~~ the spectral correction device relative to the illumination beam path so as to change the spectral intensity distribution of the light from the light source.